

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ0880TVP01
Application No. AQ0880TVP01A

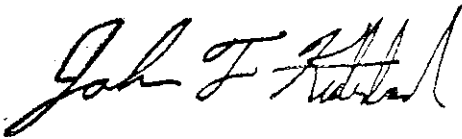
Issue Date: May 16, 2007
Expiration Date: June 14, 2012

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Golden Valley Electric Association**, for the operation of the **Delta Power Plant**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

This Operating Permit becomes effective June 14, 2007.



John F. Kuterbach, Manager
Air Permits Program

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List of Abbreviations Used in this Permit

AAC.....	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AS	Alaska Statutes
ASTM	American Society for Testing and Materials
BACT.....	Best Available Control Technology
BHp.....	Boiler Horsepower
C.F.R.....	Code of Federal Regulations
The Act	Clean Air Act
CO.....	Carbon Monoxide
dscf.....	Dry standard cubic foot
EPA.....	US Environmental Protection Agency
EU	Emission Unit
gr./dscf	grain per dry standard cubic foot (1 pound = 7000 grains)
GPH	gallons per hour
HAPs.....	Hazardous Air Pollutants [<i>HAPs</i> as defined in AS 46.14.990(14)]
ID	Emission Unit Identification Number
kPa	kiloPascals
LAER.....	Lowest Achievable Emission Rate
MACT.....	Maximum Achievable Control Technology as defined in 40 C.F.R. 63.
MR&R	Monitoring, Recordkeeping, and Reporting
NESHAPs	Federal National Emission Standards for Hazardous Air Pollutants [<i>NESHAPs</i> as contained in 40 C.F.R. 61 and 63]
NO _x	Nitrogen Oxides
NSPS.....	Federal New Source Performance Standards [<i>NSPS</i> as contained in 40 C.F.R. 60]
O & M.....	Operation and Maintenance
O ₂	Oxygen
PAL.....	Plantwide Applicability Limitation
PM-10	Particulate Matter less than or equal to a nominal ten microns in diameter
ppm	Parts per million
ppmv, ppmvd	Parts per million by volume on a dry basis
psia.....	Pounds per Square Inch (absolute)
PSD.....	Prevention of Significant Deterioration
PTE	Potential to Emit
SIC.....	Standard Industrial Classification
SO ₂	Sulfur dioxide
TPH.....	Tons per hour
TPY.....	Tons per year
VOC.....	volatile organic compound [<i>VOC</i> as defined in 40 C.F.R. 51.100(s)]
VOL	volatile organic liquid [<i>VOL</i> as defined in 40 C.F.R. 60.111b, Subpart Kb]
vol%.....	volume percent
wt%.....	weight percent

Section 1. Stationary Source Information

Identification

Names and Addresses

Permittee: Golden Valley Electric Association
P.O. Box 71249
Fairbanks, Alaska 99707-1249

Stationary Source Name: Delta Power Plant

Location: 64.03570° North; 145.72860° West

Physical Address: Adjacent to GVEA's Jarvis Creek Substation
Delta Junction, Alaska

Owner: Golden Valley Electric Association
P.O. Box 71249
Fairbanks, Alaska 99707-1249

Operator: Golden Valley Electric Association
P.O. Box 71249
Fairbanks, Alaska 99707-1249

Permittee's Responsible Official: Kate Lamal, Vice President of Power Supply

Designated Agent: Henrik Wessel, Environmental Officer
P.O. Box 71249
Fairbanks, Alaska 99707-1249

Stationary Source
and Building Contact: Lynn Thompson
907) 460-5627
lthompson@gvea.com

Fee Contact: Henrik Wessel, Environmental Officer
P.O. Box 71249
Fairbanks, Alaska 99707-1249

Permit Contact: Henrik Wessel
907-451-5627
hw@gvea.com

Stationary Source Process Description

SIC Code of the Stationary Source: 4911 – Electric Services

[18 AAC 50.040(j)(3), 12/3/05 and 18 AAC 50.326(a), 10/1/04][40 C.F.R. 71.5(c)(1 & 2), 7/1/04]

Section 2. Emission Unit Inventory and Description

Emission units listed in Table A have specific monitoring, record keeping, or reporting conditions in this permit. Emission unit descriptions and ratings are given for identification purposes only.

Table A - Emission Unit Inventory^a

EU ID	Emission unit Name	Emission unit Description	Rating/size	Installation Date
1 ^b	Chena 6	John Brown Ltd. Gas Turbine Frame 5P	23.1 MW / 2,415 gal/hr	Constructed 1976 moved to Delta 2005

Table Notes:

^a Except as noted elsewhere in this permit, the information in this table is for identification purposes only.

^b Prior to installation at the Delta Power Plant, this John Brown Frame 5 turbine was listed as Emission Unit 1 in Table 1 of Permit 174TVP01 for GVEA's Chena Power Plant Fairbanks, and as "Chena 6" in permit 9331-AA007.

[18 AAC 50.326(a), 10/1/04]

[40 C.F.R. 71.5(c)(3), 7/1/04]

Table B – Insignificant Sources

EU ID	Emission unit Name	Emission unit Description	Rating/size	Installation Date
2 ^a		Black start diesel unit	500 bhp	Constructed 1976 moved to Delta 2005
3 ^b		Thermo Pride Oil Fired Furnace	0.4 MMBtu/hr	Constructed 1990 moved to Delta 2005
4 ^a		Fuel storage tank	50,000 gal	Constructed 1997 moved to Delta 2005

Table Notes:

^a Insignificant based on emissions

^b Insignificant based on size or production rate basis

Section 3. State Requirements

Visible Emissions Standards

- 1. Industrial Process and Fuel-Burning Equipment Visible Emissions.** The Permittee shall comply with the following:

- 1.1 Do not cause or allow visible emissions, excluding condensed water vapor, emitted from EU ID 1 listed in Table A to reduce visibility through the exhaust effluent by any of the following:

- a. more than 20 percent for a total of more than three minutes in any one hour¹;
[18 AAC 50.040(e) & (j), 12/3/05 and 18 AAC 50.326(j), 12/1/04; and 18 AAC 50.055(a)(1), 1/18/97]
[40 C.F.R. 52.70 and 71.6(a)(1), 7/1/04]
- b. more than 20 percent averaged over any six consecutive minutes².
[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j), 12/1/04; and 18 AAC 50.055(a)(1), 5/3/02]
[40 C.F.R. 71.6(a)(1), 7/1/04]

- 1.2 For EU ID 1, monitor, record and report in accordance with conditions 2 - 4.

[18 AAC 50.040(j), 12/3/05 & 18 AAC 50.326(j) and 18 AAC 50.346(c), 10/1/04]
[40 C.F.R. 71.6(a)(3), 7/1/04]

Visible Emissions Monitoring, Recordkeeping and Reporting

Liquid Fuel-fired Sources (EU ID 1)

- 2. Visible Emissions Monitoring.** The Permittee shall observe the exhaust of EU ID 1 for visible emissions using either the Method 9 Plan under condition 2.1 or the Smoke/No-Smoke Plan under condition 2.2. The Permittee may change visible emissions plans for an emission unit at any time unless prohibited from doing so by condition 2.3.

[18 AAC 50.040(j), 12/3/05, 18 AAC 50.326(j) 12/3/05 and 18 AAC 50.346(c), 10/1/04]
[40 C.F.R. 71.6(a)(3)(i), 7/1/04]

- 2.1 **Method 9 Plan.** For all 18-minute observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.

- a. First Method 9 Observation. Observe exhaust for 18 minutes within six months after the issue date of this permit or within 14 calendar days after changing from the Smoke/No-Smoke Plan of condition 2.2, whichever is later.

¹ For purposes of this permit, the "more than three minutes in any one hour" criterion in this condition and condition 14.1 will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective May 3, 2002 is adopted by the U.S. EPA.

² The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.

- b. Monthly Method 9 Observations. After the first Method 9 observation, perform 18-minute observations at least once in each calendar month that a source operates.
- c. Semiannual Method 9 Observations. After observing emissions for three consecutive operating months under condition 2.1b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, observe emissions at least semiannually for 18 minutes.
Semiannual observations must be taken between four and seven months after the previous set of observations.
- d. Annual Method 9 Observations. After at least two semiannual 18-minute observations, unless a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, observe emissions at least annually.
Annual observations must be taken between 10 and 13 months after the previous observations and must include at least three 18-minute sets of observations.
- e. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that source to at least monthly intervals, until the criteria in condition 2.1c for semiannual monitoring are met.

2.2 Smoke/No Smoke Plan. Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.

- a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that a source operates.
- b. Reduced Monitoring Frequency. After the source has been observed on 30 consecutive operating days, if the source operated without visible smoke in the exhaust for those 30 days, then observe emissions at least once in every calendar month that a source operates.
- c. Smoke Observed. If smoke is observed, either begin the Method 9 Plan of condition 2.1 or perform the corrective action required under condition 2.3.

2.3 Corrective Actions Based on Smoke/No Smoke Observations. If visible emissions are present in the exhaust during an observation performed under the Smoke/No Smoke Plan of condition 2.2, then the Permittee shall either follow the Method 9 plan of condition 2.1 or

- a. initiate actions to eliminate smoke from the source within 24 hours of the observation;

- b. keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke; and
- c. after completing the actions required under condition 2.3a,
 - (i) take Smoke/No Smoke observations in accordance with condition 2.2
 - (A) at least once per day for the next seven operating days and until the initial 30 day observation period is completed; and
 - (B) continue as described in condition 2.2b; or
 - (ii) if the actions taken under condition 2.3a do not eliminate the smoke, or if subsequent smoke is observed under the schedule of condition 2.3c(i)(A), then observe the exhaust using the Method 9 Plan, unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan; after observing smoke and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under condition 2.2a.

3. Visible Emissions Recordkeeping. The Permittee shall keep records as follows:

[18 AAC 50.040(j), 12/3/05 & 50.326(j) and 18 AAC 50.346(c), 10/1/04]
[40 C.F.R. 71.6(a)(3)(ii), 7/1/04]

3.1 If using the Method 9 Plan of condition 2.1

- a. the observer shall record
 - (i) the name of the stationary source, emission unit and location, stationary source type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet in Section 9;
 - (ii) the time, estimated distance to the emissions location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate) on the sheet at the time opacity observations are initiated and completed;
 - (iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;
 - (iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Record in Section 9, and
 - (v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period;

- b. to determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet;
 - c. calculate and record the highest 18-consecutive-minute averages observed.
- 3.2 If using the Smoke/No Smoke Plan of condition 2.2, record the following information in a written log for each observation and submit copies of the recorded information upon request of the Department:
 - a. the date and time of the observation;
 - b. from Table A, the ID of the source observed;
 - c. whether visible emissions are present or absent in the exhaust;
 - d. a description of the background to the exhaust during the observation;
 - e. if the source starts operation on the day of the observation, the startup time of the source;
 - f. name and title of the person making the observation; and
 - g. operating rate (load or fuel consumption rate).

4. Visible Emissions Reporting. The Permittee shall report visible emissions as follows:

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j) & 50.346(c), 10/1/04]
[40 C.F.R. 71.6(a)(3)(iii), 7/1/04]

- 4.1 include in each stationary source operating report under condition 50
 - a. which visible-emissions plan of condition 2 was used for each source; if more than one plan was used, give the time periods covered by each plan;
 - b. for each source under the Method 9 Plan,
 - (i) copies of the observation results (i.e. opacity observations) for each source that used the Method 9 Plan, except for the observations the Permittee has already supplied to the Department; and
 - (ii) a summary to include:
 - (A) number of days observations were made;
 - (B) highest six-minute average observed; and

- (C) dates when one or more observed six-minute averages were greater than 20 percent;
 - c. for each source under the Smoke/No Smoke Plan, the number of days that Smoke/No Smoke observations were made and which days, if any, that smoke was observed; and
 - d. a summary of any monitoring or record keeping required under conditions 2 and 3 that was not done;
- 4.2 report under condition 49:
- a. the results of Method 9 observations that exceed an average 20 percent for any six-minute period; and
 - b. if any monitoring under condition 2 was not performed when required, report within three days of the date the monitoring was required.

Particulate Matter Emissions Standards

- 5. Industrial Process and Fuel-Burning Equipment Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from EU ID 1 listed in Table A to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j), 12/1/04; and 18 AAC 50.055(b)(1), 1/18/97]
[40 C.F.R. 71.6(a)(1), 7/1/04]

- 5.1 For EU ID1, monitor, record and report in accordance with conditions 6 - 8.

- 5.2 For EU ID 1, the Permittee must annually certify compliance under condition 51 with the particulate matter standard.

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j) & 50.346(c), 10/1/04]
[40 C.F.R. 71.6(a)(3), 7/1/04]

PM Monitoring, Recordkeeping and Reporting

Liquid-Fired Sources (EU ID 1)

- 6. Particulate Matter Monitoring for Diesel Engines and Liquid-Fired Turbines.** The Permittee shall conduct source tests on liquid-fired turbine, EU ID 1, to determine the concentration of particulate matter (PM) in the exhaust of a source in accordance with this condition 6.

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j) & 50.346(c), 10/1/04]
[40 C.F.R. 71.6(a)(3)(i), 7/1/04]

- 6.1 Within six months of exceeding the criteria of conditions 6.2a or 6.2b, either
- a. conduct a PM source test according to requirements set out in Section 5; or

-
- b. make repairs so that emissions no longer exceed the criteria of condition 6.2; to show that emissions are below those criteria, observe emissions as described in condition 2.1 under load conditions comparable to those when the criteria were exceeded.
 - 6.2 Conduct the test according to condition 6.1 if
 - a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or
 - b. for a source with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing.
 - 6.3 During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.
 - 6.4 The automatic PM source test requirement in conditions 6.1 and 6.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.
 - 7. **Particulate Matter Record Keeping for Diesel Engines and Liquid-Fired Turbines.** Within 180 calendar days after the effective date of this permit, the Permittee shall record the exhaust stack diameter(s) of EU ID 1. Report the stack diameter in the next operating report under condition 50.

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j) & 50.346(c), 10/1/04]
[40 C.F.R. 71.6(a)(3)(ii), 7/1/04]
 - 8. **Particulate Matter Reporting for Diesel Engines and Liquid-Fired Turbines.** The Permittee shall report as follows:

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j) & 50.346(c), 10/1/04]
[40 C.F.R. 71.6(a)(3)(iii), 7/1/04]

 - 8.1 report under condition 49
 - a. the results of any PM source test that exceeds the PM emissions limit; or
 - b. if one of the criteria of condition 6.2 was exceeded and the Permittee did not comply with either condition 6.1a or 6.1b, this must be reported by the day following the day compliance with condition 6.1 was required;
 - 8.2 report observations in excess of the threshold of condition 6.2b within 30 days of the end of the month in which the observations occur;
 - 8.3 in each stationary source operating report under condition 50, include

- a. the dates, EU ID(s), and results when an observed 18-minute average was greater than an applicable threshold in condition 6.2;
- b. a summary of the results of any PM testing under condition 6; and
- c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of condition 6.2, if they were not already submitted.

Sulfur Compound Emission Standards Requirements

- 9. Sulfur Compound Emissions.** In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from EU ID 1 to exceed 500 ppm averaged over three hours.

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j), 12/1/04; and 18 AAC 50.055(c), 1/18/97]
[40 C.F.R. 71.6(a)(1), 7/1/04]

For fuel oil, EU ID 1

- 9.1 The Permittee shall do one of the following for each shipment of fuel:
- a. If the fuel grade requires a sulfur content less than 0.5 percent by weight, keep receipts that specify fuel grade and amount; or
 - b. If the fuel grade does not require a sulfur content less than 0.5 percent by weight, keep receipts that specify fuel grade and amount and
 - (i) test the fuel for sulfur content; or
 - (ii) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent.
- 9.2 Fuel testing under condition 9.1 must follow an appropriate method listed in 18 AAC 50.035 or another method approved in writing by the Department.
- 9.3 If a load of fuel contains greater than 0.75 percent sulfur by weight, the Permittee shall calculate SO₂ emissions in ppm using either Section 10 or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).
- 9.4 The Permittee shall report as follows:
- a. If SO₂ emissions calculated under condition 9.3 exceed 500 ppm, the Permittee shall report under condition 49. When reporting under this condition, include the calculation under Section 10
 - b. The Permittee shall include in the report required by condition 50
 - (i) a list of the fuel grades received at the stationary source during the reporting period;

- (ii) for any grade with a maximum fuel sulfur greater than 0.5 percent sulfur, the fuel sulfur of each shipment; and
- (iii) for fuel with a sulfur content greater than 0.75 percent, the calculated SO₂ emissions in ppm.

[18 AAC 50.040(j), 12/3/05, and AAC 18 50.326(j) and 18 AAC 50.346(c), 10/1/04]

[40 C.F.R. 71.6(a)(3), 7/1/04]

Pre-Construction Permit Requirements

- 10. Maintenance Requirements.** The Permittee shall maintain Emission Units 1-3 according to the manufacturer's or operator's maintenance procedures.

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j), 10/01/04]

[40 C.F.R. 71.6(a), 7/1/05]

[Condition 10, Construction Permit No. AQ0880MSS01, 6/24/05]

Owner Requested Limits to Avoid Stationary Source and Project Classification as PSD Major for NO_x and SO₂, and for Ambient Air Quality Protection

- 11. NO_x Emission Limit.** The Permittee shall limit NO_x emissions from Emission Units 1-3³ listed in Table A and Table B to less than 249 tons per 12 consecutive months. Monitor, record and report as follows.

11.1 Using a dedicated continuous fuel monitoring system, that is accurate within two percent, track and record the fuel consumption for Emission Unit 1.

11.2 By the 15th of each month, calculate and record the monthly NO_x emissions for the prior month for Emission Unit 1, in tons per month using Equation 1, and add the total for the previous 11 months to get the 12 consecutive month total.

$$\text{Equation 1} \quad NO_x = HI \times EF \times \frac{1 \text{ ton}}{2000 \text{ lb}}$$

Where: NO_x = NO_x emissions in tons/month

HI = Total heat input in MMBtu/month; calculated by multiplying the fuel consumption in gallons/month (condition 11.1) by 0.133021 MMBtu/gallon (the higher heating value (HHV) of the fuel)⁴ or the most recent higher heating value from source testing if required under condition 11.6.

EF = NO_x emission factor in pounds/MMBtu. Use the value listed in Table C or the maximum source test value from the most recent source test approved by the Department.

³ NO_x emissions from Units 2 and 3 are negligible, so are not counted in the 249 tpy limit.

⁴ Heating value of fuel from Title I minor permit AQ0880MSS01.

Table C - NO_x Emission Factor Emission Unit 1

Emission Unit	NO_x Emission Factor^a
1	0.72 lb/MMBtu

Table notes

^a Based on the maximum value from most recent source test, 2/14/06

- 11.3 Report as excess emissions under condition 49 if the NO_x emissions calculated under condition 11.2 exceed 249 tons per 12 consecutive months.
- 11.4 Include in the operating report required under condition 50, the monthly and 12-month rolling total NO_x emissions for Emission Unit 1 calculated under condition 11.2.
- 11.5 Report the consecutive 12-month rolling total of hours of operation in the operating report under condition 50.
- 11.6 The Permittee shall conduct a source test on Emission Unit 1 if operated over 850 hours per 12-month rolling period to update the NO_x emission factor in Table C used in **Equation 1**.
- a. Within six months of exceeding the criteria of Condition 11.6 the Permittee shall conduct a source test in accordance with Section 5.
- b. The Permittee may use the results of the most recent source test in lieu of source testing under item a above, if that source test was conducted within the last 5-years.
- 11.7 The Permittee shall use the latest NO_x emission factor when calculating the NO_x emissions in **Equation 1****Error! Reference source not found..**

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j), 10/01/04]

[40 C.F.R. 71.6(a), 7/1/05]

[Condition 5, Construction Permit No AQ0880MSS01, 6/24/05]

- 12. Fuel Sulfur Limit.** The Permittee shall not allow the sulfur content of the fuel burned in Units 1 through 3 to exceed 0.2 weight percent sulfur (wt%S) at any time. Monitor, record and report as follows.

- 12.1 Obtain a certificate or receipt from the fuel supplier of the fuel sulfur content for each shipment of fuel delivered to the stationary source. If a receipt is not available from the supplier, analyze a representative sample of the fuel to determine the sulfur content using ASTM method D129, D1266, D1552, D2622, D4294, D4045, D240, or an alternative method approved by the Department.
- 12.2 If the sulfur content of any diesel fuel delivery exceeds 0.2 wt%S, then determine the fuel sulfur content of the fuel in the tank after delivery using Equation 2.

Equation 2
$$S_{TA} = \frac{(Q_D \times S_D) + (Q_{TB} \times S_{TB})}{100}$$

Where:

Q_D	=	Quantity of delivered fuel, percent of total, by weight
S_D	=	Sulfur content of delivered fuel, percent sulfur by weight
Q_{TB}	=	Quantity of fuel in tank before delivery, percent of total, by weight
S_{TB}	=	Sulfur content of tank before delivery, percent sulfur by weight
S_{TA}	=	Sulfur content of fuel in tank after delivery, percent sulfur by weight

[18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j), 10/01/04]

[40 C.F.R. 71.6(a), 7/1/05]

[Condition 6, Construction Permit No. AQ0880MSS01, 6/24/05]

- 12.3 Report as excess emissions under condition 49 if the fuel sulfur content in the tank after delivery exceeds 0.2 wt%S.
- 12.4 Include all records required by conditions 12.1 and 12.2 with the operating report required by condition 50.

Stationary Source-Wide Specific Requirements

Insignificant Emission Units

13. For EU IDs 2, 3, and 4 listed in Table B and for emission units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply:
- 13.1 The Permittee shall submit the compliance certifications of condition 51 based on reasonable inquiry;
- 13.2 The Permittee shall comply with the requirements of condition 27;
- 13.3 The Permittee shall report in the operating report required by condition 50 if an emission unit is insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and actual emissions become greater than any of those thresholds;

13.4 No other monitoring, recordkeeping or reporting is required.

[18 AAC 50.346(b)(4), 10/1/04]

14. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by any of the following:

14.1 more than 20 percent for a total of more than three minutes in any one hour⁵;

[18 AAC 50.050(a)(2) & 50.055(a)(1), 1/18/97]

[40 C.F.R. 52.70, 7/1/04]

14.2 more than 20 percent averaged over any six consecutive minutes⁶.

[18 AAC 50.050(a) & 50.055(a)(1), 5/03/02]

15. The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

16. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

⁵ See Footnote 1.

⁶ See Footnote 2.

Section 4. General Conditions

Standard Terms and Conditions

17. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (e), 5/03/02]

18. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (f), 5/03/02]

19. The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (g), 5/03/02]

20. **Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-405.

[18 AAC 50.326(j)(1), 18 AAC 50.400-405, 1/29/05, AS 37.10.052(b), 2000, AS 46.14.240 6/7/03]

21. **Emissions.** The Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410(b). The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

21.1 the stationary source's assessable potential to emit of 321 TPY; or

21.2 the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by

- a. an enforceable test method described in 18 AAC 50.220;
- b. material balance calculations;
- c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
- d. other methods and calculations approved by the Department.

[18 AAC 50.040(j)(3) 12/3/05, 18 AAC 50.326(j)(1), & 50.346(b)(1), 10/1/04 and 18 AAC 50.410 – 50.420, 01/30/05]

[40 C.F.R. 71.5(c)(3)(ii), 7/1/04]

22. Assessable Emission Estimates. Emission fees will be assessed as follows:

22.1 no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Avenue, PO Box 111800, Juneau, AK 99811-1800; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or

22.2 if no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in condition 21.1.

[18 AAC 50.040(j)(3), 12/3/05, 18 AAC 50.326(j)(1), 12/1/04 & 18AAC 50.346(b)(1), 10/1/04 and 50.410 – 50.420, 01/29/05]
[40 C.F.R. 71.5(c)(3)(ii), 7/1/04]

23. Good Air Pollution Control Practice. The Permittee shall do the following for EU ID 1:

- a. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
- b. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and
- c. keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.030, 50.326(j)(3), & 50.346(b)(5), 10/1/04]

24. Dilution. The Permittee shall not dilute emissions with air to comply with this permit. Monitoring shall consist of an annual certification that the Permittee does not dilute emissions to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

25. Reasonable Precautions to Prevent Fugitive Dust. A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.

[18 AAC 50.045(d), 1/18/97; and 18 AAC 50.040(e), 12/3/05 and 18 AAC 50.326(j)(3), & 50.346(c), 10/1/04]

25.1 The Permittee shall keep records of

- a. complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and
- b. any additional precautions that are taken
 - (i) to address complaints described in condition 25.1 or to address the results of Department inspections that found potential problems; and

- (ii) to prevent future dust problems.

25.2 The Permittee shall report according to condition 27.

- 26. Stack Injection.** The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.

[18 AAC 50.055(g), 10/1/04]

- 27. Air Pollution Prohibited.** No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 5/26/72; and 18 AAC 50.040(e), 12/3/05 and 18 AAC 50.326(j)(3), & 50.346(a), 10/1/04]
[40 C.F.R. 71.6(a)(3), 7/1/04]

27.1 Monitoring, Record Keeping, and Reporting for Air Pollution Prohibited

- a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to condition 49.
- b. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of condition 27.

27.2 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

- a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of condition 27; or
- b. the Department notifies the Permittee that it has found a violation of condition 27.

27.3 The Permittee shall keep records of

- a. the date, time, and nature of all emissions complaints received;
- b. the name of the person or persons that complained, if known;
- c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of condition 27; and
- d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

27.4 With each stationary source operating report under condition 50, the Permittee shall include a brief summary report which must include

- a. the number of complaints received;
- b. the number of times the Permittee or the Department found corrective action necessary;
- c. the number of times action was taken on a complaint within 24 hours; and
- d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

27.5 The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

28. Technology-Based Emission Standard. If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard⁷ listed in condition 30(refrigerants) , the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under condition 49 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under condition 49.

[18 AAC 50.235(a), 1/18/97 and 18 AAC 50.040(j)(4), 12/3/05 & 18 AAC 50.326(j)(4), 10/1/04]
[40 C.F.R. 71.6(c)(6), 7/1/04]

29. Asbestos NESHAP. The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(1) & (2)(F), 12/3/05 and 50.326(j), 12/1/04]
[40 C.F.R. 61, Subparts A & M, and Appendix A, 7/1/03]

30. Refrigerant Recycling and Disposal. The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d), 12/3/05 & 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 82, Subpart F, 7/1/03]

⁷ *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

NESHAPs Applicability Determinations

31. The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 C.F.R. 63) in accordance with the procedures described in 40 C.F.R. 63.1(b). If a source becomes affected by an applicable subpart of 40 C.F.R. 63, Permittee shall comply with such standard by the compliance date established by the Administrator in the applicable subpart.

- 31.1 The Permittee must keep a record of the applicability determination on site for a period of 5 years after the determination or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the Permittee believes the source is unaffected. The analysis (or other information) must be sufficiently detailed to allow the Department to make a finding about the source's applicability status with regard to the relevant standard or other requirement.

[18 AAC 50.040(c)(1)(A) & (E) & 50.040(j), 12/3/05, 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(3)(ii), 7/1/04]
[40 C.F.R. 63.1(b), & 63.6(c)(1), 4/05/02]

Halon Prohibitions, 40 C.F.R. 82

32. The Permittee shall comply with the following prohibitions set out in 40 C.F.R. 82.174 (Protection of Stratospheric Ozone Subpart G – Significant New Alternatives Policy Program).

[18 AAC 50.040(d), 12/3/05]
[40 C.F.R. 82.174 (b) - (d), 7/1/03]

- 32.1 Do not use a substitute which a person knows or has reason to know was manufactured, processed, or imported in violation of the regulations of 40 C.F.R. 82 Subpart G or knows or has reason to know was manufactured, processed, or imported in violation of any use restriction in the acceptability determination, after the effective date of any rulemaking imposing such restrictions.
- 32.2 Do not use a substitute without adhering to any use restrictions set by the acceptability decision, after the effective date of any rulemaking imposing such restrictions.
- 32.3 Do not use a substitute after the effective date of any rulemaking adding such substitute to the list of unacceptable substitutes.

33. The Permittee shall comply with the following prohibitions set out in 40 C.F.R. 82.270.

[18 AAC 50.040(d), 12/3/05]
[40 C.F.R. 82.270 (b)-(f), 7/1/03]

- 33.1 No person testing, maintaining, servicing, repairing, or disposing of halon-containing equipment or using such equipment for technician training may knowingly vent or otherwise release into the environment any halons used in such equipment, as follows:
- 33.2 De minimis⁸ releases associated with good faith attempts to recycle or recover halon are not subject to this prohibition.
- 33.3 Release of residual halon contained in fully discharged total flooding fire extinguishing systems would be considered a de minimis release associated with good faith attempts to recycle or recover halon.
- 33.4 Release of halons during testing of fire extinguishing systems is not subject to this prohibition if the following four conditions are met:
- a. systems or equipment employing suitable alternative fire extinguishing agents are not available;
 - b. system or equipment testing requiring release of extinguishing agent is essential to demonstrate system or equipment functionality;
 - c. failure of the system or equipment would pose great risk to human safety or the environment; and
 - (i) a simulant agent cannot be used in place of the halon during system or equipment testing for technical reasons.
 - d. Releases of halons associated with research and development of halon alternatives, and releases of halons necessary during analytical determination of halon purity using established laboratory practices are exempt from this prohibition.
 - e. This prohibition does not apply to qualification and development testing during the design and development process of halon-containing systems or equipment when such tests are essential to demonstrate system or equipment functionality and when a suitable simulant agent cannot be used in place of the halon for technical reasons.
 - f. This prohibition does not apply to the emergency release of halons for the legitimate purpose of fire extinguishing, explosion inertion, or other emergency applications for which the equipment or systems were designed.

⁸ Legal term meaning "of minimum importance."

- 33.5 Organizations that employ technicians who test, maintain, service, repair or dispose of halon-containing equipment shall take appropriate steps to ensure that technicians hired on or before April 6, 1998 will be trained regarding halon emissions reduction by September 1, 1998. Technicians hired after April 6, 1998 shall be trained regarding halon emissions reduction within 30 days of hiring, or by September 1, 1998, whichever is later.
- 33.6 No person shall dispose of halon- containing equipment except by sending it for halon recovery to a manufacturer operating in accordance with NFPA⁹ 10 and NFPA 12A standards, a fire equipment dealer operating in accordance with NFPA 10 and NFPA 12A standards or a recycler operating in accordance with NFPA 10 and NFPA 12A standards. This provision does not apply to ancillary system devices such as electrical detection control components which are not necessary to the safe and secure containment of the halon within the equipment, to fully discharged total flooding systems, or to equipment containing only de minimis quantities of halons.
- 33.7 No person shall dispose of halon except by sending it for recycling to a recycler operating in accordance with NFPA 10 and NFPA 12A standards, or by arranging for its destruction using one of the following controlled processes:
- a. Liquid injection incineration;
 - b. Reactor cracking;
 - c. Gaseous/fume oxidation;
 - d. Rotary kiln incineration;
 - e. Cement kiln;
 - f. Radio frequency plasma destruction; or
 - g. An EPA-approved destruction technology that achieves a destruction efficiency of 98 percent or greater.
- 33.8 No owner of halon-containing equipment shall allow halon release to occur as a result of failure to maintain such equipment.

Open Burning Requirements

- 34. Open Burning.** The Permittee shall comply with the following requirements when conducting open burning at the stationary source.

- 34.1 **General Requirements.** Except when conducting open burning under 34.7, 34.8, or 34.9, a person conducting open burning shall comply with the limitations of 34.2 - 34.6 and shall ensure that

⁹ National Fire Protection Association

- a. the material is kept as dry as possible through the use of a cover or dry storage;
- b. before igniting the burn, non-combustibles are separated to the greatest extent practicable;
- c. natural or artificially induced draft is present;
- d. to the greatest extent practicable, combustibles are separated from grass or peat layer;
- e. combustibles are not allowed to smolder; and
- f. sufficient written records are kept to demonstrate that the Permittee complies with the limitations in this condition. Upon request of the Department, submit copies of the records.

34.2 Black Smoke Prohibited. Except for firefighter training conducted under 34.8 or 34.9, open burning of asphalts, rubber products, plastics, tars, oils, oily wastes, contaminated oil cleanup materials, or other materials in a way that gives off black smoke is prohibited without written Department approval. Department approval of open burning as an oil spill response countermeasure is subject to the Department's *In Situ Burning Guidelines for Alaska*, adopted by reference in 18 AAC 50.035. Open burning approved under this subsection is subject to the following limitations:

- a. Open burning of liquid hydrocarbons produced during oil or gas well flow tests may occur only when there are no practical means available to recycle, reuse, or dispose of the fluids in a more environmentally acceptable manner;
- b. The person who conducts open burning shall establish reasonable procedures to minimize adverse environmental effects and limit the amount of smoke generated; and
- c. The Department will, in its discretion, as a condition of approval issued under this subsection, require public notice as described in 34.10.

34.3 Toxic and Acid Gases and Particulate Matter Prohibited. Open burning or incineration of pesticides, halogenated organic compounds, cyanic compounds, or polyurethane products in a way that gives off toxic or acidic gases or particulate matter is prohibited.

34.4 Adverse Effects Prohibited. Open burning of putrescible garbage, animal carcasses, or petroleum-based materials, including materials contaminated with petroleum or petroleum derivatives, is prohibited if it causes odor or black smoke that has an adverse effect on nearby persons or property.

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- 34.5 **Air Quality Advisory.** Open burning is prohibited in an area if the Department declares an air quality advisory under 18 AAC 50.245, stating that burning is not permitted in that area for that day.
- 34.6 **Wood Smoke Control Areas.** Open burning is prohibited between November 1 and March 31 in a wood smoke control area identified in 18 AAC 50.025(b).
- 34.7 **Controlled Burning.** Controlled burning to manage forest land, vegetative cover, fisheries, or wildlife habitat, other than burning to combat a natural wildfire, requires written Department approval if the area to be burned exceeds 40 acres yearly. The Department will, in its discretion, require public notice as described in 34.10 of this section.
- 34.8 **Firefighter Training: Structures.** A fire service may open burn structures for firefighter training without ensuring maximum combustion efficiency under the following circumstances:
- a. Before igniting the structure, the fire service shall
 - (i) obtain Department approval for the location of the proposed firefighter training; approval will be based on whether the proposed open burning is likely to adversely affect public health in the neighborhood of the structure;
 - (ii) visually identify materials in the structure that might contain asbestos, test those materials for asbestos, and remove all materials that contain asbestos;
 - (iii) ensure that the structure does not contain
 - (A) putrescible garbage;
 - (B) electrical batteries;
 - (C) stored chemicals such as fertilizers, pesticides, paints, glues, sealers, tars, solvents, household cleaners, or photographic reagents;
 - (D) stored linoleum, plastics, rubber, tires, or insulated wire;
 - (E) hazardous waste;
 - (F) lead piping;
 - (G) plastic piping with an outside diameter of four inches or more; or
 - (H) urethane or another plastic foam insulation;

- (iv) provide public notice consistent with 34.10; and
- (v) ensure that a fire-service representative is on-site before igniting the structure;
- b. the fire service shall ignite and conduct training on only one main structure and any number of associated smaller structures at a time; examples of associated smaller structures are garages, sheds, and other outbuildings; and
- c. the fire service shall respond to complaints in accordance with 34.11.

34.9 Firefighter Training: Fuel Burning. Unless a greater quantity is approved by the Department, a fire service may open burn up to 250 gallons of uncontaminated fuel daily and up to 600 gallons yearly for firefighter training without ensuring maximum combustion efficiency. To conduct this training without prior written Department approval, the fire service shall

- a. provide public notice consistent with 34.10 before burning more than 20 gallons of uncontaminated fuel, unless waived in writing by the Department; and
- b. respond to complaints in accordance with 34.11.

34.10 Public Notice. A person required to provide public notice of open burning shall issue the notice through local news media or by other appropriate means if the area of the open burning does not have local news media. The public notice must be issued as directed by the Department and must

- a. state the name of the person conducting the burn;
- b. provide a list of material to be burned;
- c. provide a telephone number to contact the person conducting the burn before and during the burn;
- d. for a surprise fire drill, state
 - (i) the address or location of the training; and
 - (ii) the beginning and ending dates of the period during which a surprise fire drill may be conducted (this period may not exceed 30 days); and
- e. for open burning other than a surprise fire drill, state the expected time, date, and location of the open burning.

34.11 Complaints. A person required to provide public notice of open burning shall

-
- a. make a reasonable effort to respond to complaints received about the burn;
 - b. keep, for at least 30 days, a record of all complaints received about the burn, including to the extent feasible
 - (i) the name, address, and telephone number of each person who complained;
 - (ii) a short summary of each complaint; and
 - (iii) any action the person conducting the open burning took to respond to each complaint; and
 - c. upon request, provide the Department with a copy of the records kept under 34.11b.

[18 AAC 50.065, 1/18/97; and 18 AAC 50.040(j), 12/3/05 and 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a) (3), 7/1/04]

Section 5. General Source Testing and Monitoring Requirements

- 35. Requested Source Tests.** In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.
[18 AAC 50.220(a), 1/18/97 & 18 AAC 50.345(a) & (k), 5/03/02]
- 36. Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing
[18 AAC 50.220(b), 1/18/97]
- 36.1 at a point or points that characterize the actual discharge into the ambient air; and
- 36.2 at the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.
- 37. Reference Test Methods.** The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:
- 37.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.
[18 AAC 50.220(c)(1)(A), 1/18/97 & 18 AAC 50.040(a), 12/3/05]
[40 C.F.R. 60, 7/1/03]
- 37.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.
[18 AAC 50.040(b), 12/3/05 & 18 AAC 50.220(c)(1)(B), 1/18/97]
[40 C.F.R. 61, 7/1/03]
- 37.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.
[18 AAC 50.040(c), 12/3/05, 18 AAC 50.220(c)(1)(C), 1/18/97]
[40 C.F.R. 63, 2/03/04]
- 37.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9 and may use the form in Section 9 to record data.
[18 AAC 50.030, 5/03/02, 18 AAC 50.220(c)(1)(D), 1/18/97]
- 37.5 Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(3), 12/3/05, 18 AAC 50.220(c)(1)(E), 1/18/97]
[40 C.F.R. 60, Appendix A, 7/8/04]

37.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

[18 AAC 50.035(b)(2), 10/1/04; and 50.220(c)(1)(F), 1/18/97]
[40 C.F.R. 51, Appendix M, 7/01/03]

37.7 Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c)(24), 12/3/05 & 50.220(c)(2), 1/18/97]
[40 C.F.R. 63, Appendix A, Method 301, 2/03/04]

38. **Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3), 1/18/97 & 50.990(102), 10/1/04]

39. **Test Exemption.** The Permittee is not required to comply with conditions 41, 42 and 43 when the exhaust is observed for visible emissions by Method 9 Plan (condition 2.1) or Smoke/No Smoke Plan (condition 2.2).

[18 AAC 50.345(a), 5/03/02]

40. **Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.

[18 AAC 50.345(a) & (l), 5/03/02]

41. **Test Plans.** Except as provided in condition 39, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the source will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under condition 35 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

[18 AAC 50.345(a) & (m), 5/03/02]

42. **Test Notification.** Except as provided in condition 39, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.

[18 AAC 50.345(a) & (n), 5/03/02]

- 43. Test Reports.** Except as provided in condition 39, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall additionally certify the results in the manner set out in condition 46. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

[18 AAC 50.345(a) & (o), 5/03/02]

- 44. Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in conditions 5 and 15, the three-hour average is determined using the average of three one-hour test runs. The source testing must account for those emissions caused by soot blowing, grate cleaning, or other routine maintenance activities by ensuring that at least one test run includes the emissions caused by the routine maintenance activity and is conducted under conditions that lead to representative emissions from that activity. The emissions must be quantified using the following equation:

Equation 3

$$E = E_M \left[(A + B) \times \frac{S}{R \times A} \right] + E_{NM} \left[\frac{(R - S)}{R} - \frac{B \times S}{R \times A} \right]$$

Where:

- E = the total PM emissions of the source in grains per dry standard cubic foot (gr./dscf).
- E_M = the PM emissions in gr./dscf measured during the test that included the routine maintenance activity.
- E_{NM} = the arithmetic average of PM emissions in gr./dscf measured during the test runs that did not include the maintenance activity.
- A = the period of routine maintenance activity occurring during the test run that included routine maintenance activity, expressed to the nearest hundredth of an hour.
- B = the total period of the test run, less A.
- R = the maximum period of source operation per 24 hours, expressed to the nearest hundredth of an hour.
- S = the maximum period of routine maintenance activity per 24 hours, expressed to the nearest hundredth of an hour.

[18 AAC 50.220(f), 1/18/97]

Section 6. General Recordkeeping and Reporting Requirements

Recordkeeping Requirements

- 45. Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

[18 AAC 50.326(j), 12/1/04]
[40 C.F.R 60.7(f), Subpart A, 7/8/04 and 71.6(a)(3)(ii)(B), 7/1/04]

- 45.1 copies of all reports and certifications submitted pursuant to this section of the permit; and
- 45.2 records of all monitoring required by this permit, and information about the monitoring including:
 - a. the date, place, and time of sampling or measurements;
 - b. the date(s) analyses were performed;
 - c. the company or entity that performed the analyses;
 - d. the analytical techniques or methods used;
 - e. the results of such analyses; and,
 - f. the operating conditions as existing at the time of sampling or measurement.
 - g. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation

Reporting Requirements

- 46. Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

- 46.1 The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if
 - a. a certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and

- b. the person providing the electronic signature has made an agreement, with the certifying authority described in 46.1a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature,

[18 AAC 50.345(a) & (j), 5/3/02; 18 AAC 50.205 & 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(3)(iii)(A), 7/1/04]

- 47. Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send two copies of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Avenue, Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with condition 46.

[18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(3)(iii)(A), 7/1/04]

- 48. Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.345(a) & (i), 5/3/02; 18 AAC 50.200, and 50.326(a) & (j), 10/1/04]
[40 C.F.R. 71.5(a)(2) & 71.6(a)(3), 7/1/04]

- 49. Excess Emissions and Permit Deviation Reports.**

[18 AAC 50.235(a)(2), 50.240(c), 50.326(j)(3), and 50.346(b)(2) & (3), 10/1/04]

- 49.1 Except as provided in condition 27, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

- a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report
 - (i) emissions that present a potential threat to human health or safety; and
 - (ii) excess emissions that the Permittee believes to be unavoidable;
- b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non-routine repair that causes emissions in excess of a technology based emission standard;
- c. report all other excess emissions and permit deviations
 - (i) within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in conditions 49.1c(ii) and 49.1c(iii);

- (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under condition 49.1c(i); and
- (iii) for failure to monitor, as required in other applicable conditions of this permit.

49.2 The Permittee must report using either the Department's on-line form, to be found at time of permit issue at <http://www.dec.state.ak.us/air/ap/docs/adby/4notform.pdf>, or the form contained in Section 11 of this permit. The Permittee must provide all information called for by the form that is used.

49.3 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions or permit deviation report.

50. Operating Reports. During the life of this permit, the Permittee shall submit to the Department one original and one copy of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

[18 AAC 50.346(b)(6) & 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(3)(iii)(A), 7/1/04]

50.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

50.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under condition 50.1, either

a. The Permittee shall identify

- (i) the date of the deviation;
- (ii) the equipment involved;
- (iii) the permit condition affected;
- (iv) a description of the excess emissions or permit deviation; and
- (v) any corrective action or preventive measures taken and the date of such actions; or

b. When excess emissions or permit deviations have already been reported under condition 49 the Permittee must cite the date or dates of those reports.

50.3 The operating report must include a listing of emissions monitored under conditions 2.1e, and 2.2c which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report:

- a. the date of the emissions;
- b. the equipment involved;
- c. the permit condition affected; and
- d. the monitoring result which triggered the additional monitoring.

51. Annual Compliance Certification. Each year, by March 31, the Permittee shall compile and submit to the Department one original and one copy of an annual compliance certification report.

51.1 Certify the compliance status of the stationary source over the preceding calendar year consistent with the monitoring required by this permit, as follows:

- a. identify each term or condition set forth in Section 3 through Section 8, that is the basis of the certification;
- b. briefly describe each method used to determine the compliance status;
- c. state whether compliance is intermittent or continuous; and
- d. identify each deviation and take it into account in the compliance certification;

51.2 In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.205 & 50.326(j), 12/1/04 & 50.345(a) & (j), 5/03/02]
[40 C.F.R. 71.6(c)(5), 7/1/04]

52. NSPS and NESHAP Reports. The Permittee shall:

- 52.1** attach to the facility operating report required by condition 50, a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10; and
- 52.2** upon request by the Department, notify and provide a written copy of any EPA-granted waiver of the federal emission standards, record keeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules.

18 AAC 50.326(j)(4), 12/1/04, 18 AAC 50.040(j), 12/3/05]
[40 CFR 71.6(c)(6), 7/1/04]

Section 7. Permit Changes and Renewal

- 53. Emissions Trading:** No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.

[18 AAC 50.040(j)(4), 12/3/05 and 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(8), 7/1/04]

- 54. Off Permit Changes.** The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 CFR part 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met:

[18 AAC 50.040(j)(4), 12/3/05 and 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(12), 7/1/04]

- 54.1** Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;
- 54.2** Provide contemporaneous written notice to EPA and the Department of each such change, except for changes that qualify as insignificant under 18 AAC 50.326(d) – (i). Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change;
- 54.3** The change shall not qualify for the shield under 40 CFR 71.6(f);
- 54.4** The Permittee shall keep a record describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- 55. Operational Flexibility.** The Permittee may make changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions):
- 55.1** The Permittee shall provide EPA and the Department with a notification no less than 7 days in advance of the proposed change.
- 55.2** For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.
- 55.3** The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to condition 55.

[18 AAC 50.040(j)(4), 12/3/05 and 18 AAC 50.326(j), 12/1/04]
[40 C.F.R. 71.6(a)(13), 7/1/04]

- 56. Permit Renewal.** To renew this permit, the Permittee shall submit an application under 18 AAC 50.326 no sooner than **December 14, 2010** and no later than **December 14, 2011**. **The renewal application shall be complete before the permit expiration date listed on the cover page of this permit.** Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 CFR 71.7(b) and 71.5(a)(1)(iii).

[18 AAC 50.040(j)(3), 12/3/05 and 18 AAC 50.326(c)(2) & (j)(2), 10/1/04]
[40 CFR 71.5(a)(1)(iii) and 71.7(b) & (c)(1)(ii), 7/1/04]

- 57.** The Permittee shall submit to the US Environmental Protection Agency (EPA) a copy of any application for a revision, modification, or renewal (including amendments) of this permit, including any compliance plan, at the time the application is submitted to ADEC. To the extent practicable, the application shall be provided in computer-readable format compatible with EPA's national database management system.

[40 CFR 70.8(a)(1), 7/1/05]

Section 8. Compliance Requirements

General Compliance Requirements

- 58.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are

58.1 included and specifically identified in the permit; or

58.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (b), 5/03/02]

- 59.** The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14.120(c), 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

59.1 an enforcement action;

59.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

59.3 denial of an operating permit renewal application.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (c), 5/03/02]

- 60.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.326(j)(3), 10/1/04 & 50.345(a) & (d), 5/03/02]

- 61.** The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

61.1 enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

61.2 have access to and copy any records required by the permit;

61.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

61.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.326(j)(3) and 50.345(a) & (h), 10/1/04]

Compliance Schedule

- 62.** For applicable requirements with which the Delta Power Plant is in compliance, the Permittee will continue to comply with such requirements.

[18 AAC 50.040(j), 12/3/05 & 18 AAC 50.326(j), 12/1/04]
[40 CFR 71.6(c)(3) & 71.5(c)(8)(iii)(A)]

- 63.** For applicable requirements that will become effective during the permit term, the Permittee shall meet such requirements on a timely basis.

[18 AAC 50.040(j), 12/3/05 & 18 AAC 50.326(j), 12/1/04]
[40 CFR 71.6(c)(3) & 71.5(c)(8)(iii)(B)]

Section 9. Visible Emissions Forms

Visible Emissions Field Data Sheet

Certified Observer: _____

Company &
Stationary
Source: _____

Location: _____

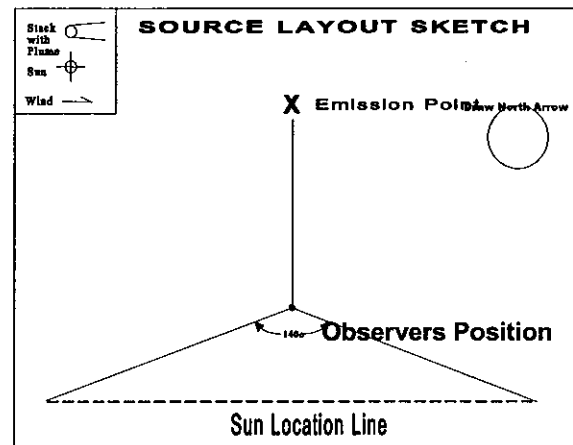
Test No.: _____ Date: _____

Emission Unit: _____

Production Rate/Operating
Rate: _____

Unit Operating Hours: _____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location					
Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions					
Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description:					
Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Page of

Test Number	Clock Time
-------------	------------

[illegible]

Observer Signature and Date

Certified By and Date

Duration of Observation Period (minutes): _____ Duration Required by Permit (minutes) _____

Number of Observations	Highest Six –Minute Average Opacity (%)
1	100
2	100
3	100
4	100
5	100
6	100
7	100
8	100
9	100
10	100
11	100
12	100
13	100
14	100
15	100
16	100
17	100
18	100
19	100
20	100
21	100
22	100
23	100
24	100
25	100
26	100
27	100
28	100
29	100
30	100
31	100
32	100
33	100
34	100
35	100
36	100
37	100
38	100
39	100
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41	100
42	100
43	100
44	100
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46	100
47	100
48	100
49	100
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53	100
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63	100
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67	100
68	100
69	100
70	100
71	100
72	100
73	100
74	100
75	100
76	100
77	100
78	100
79	100
80	100
81	100
82	100
83	100
84	100
85	100
86	100
87	100
88	100
89	100
90	100
91	100
92	100
93	100
94	100
95	100
96	100
97	100
98	100
99	100
100	100

Number of Observations exceeding 20%

In compliance with three-minute aggregate opacity limit? (Yes or No)

In compliance with six-minute opacity limit? (Yes or No) _____

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 10. Material Balance Calculation

If the sulfur content of a fuel shipment is greater than 0.75% by weight, calculate the three-hour exhaust concentration of SO₂ using the following equations:

$$\begin{aligned}
 A. &= 31,200 \times [\text{wt}\%S_{\text{fuel}}] = 31,200 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\
 B. &= 0.148 \times [\text{wt}\%S_{\text{fuel}}] = 0.148 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\
 C. &= 0.396 \times [\text{wt}\%C_{\text{fuel}}] = 0.396 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\
 D. &= 0.933 \times [\text{wt}\%H_{\text{fuel}}] = 0.933 \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\
 E. &= B + C + D = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\
 F. &= 21 - [\text{vol}\%_{\text{dry}}O_{2, \text{exhaust}}] = 21 - \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\
 G. &= [\text{vol}\%_{\text{dry}}O_{2, \text{exhaust}}] \div F = \underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\
 H. &= 1 + G = 1 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\
 I. &= E \times H = \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \\
 \text{SO}_2 \text{ concentration} &= A \div I = \underline{\hspace{1cm}} \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}} \text{ ppm}
 \end{aligned}$$

The **wt%*S*_{fuel}**, **wt%*C*_{fuel}**, and **wt%*H*_{fuel}** are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to condition 9.1. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (**vol%*dry**O*_{2, exhaust}**) is obtained from oxygen meters, manufacturer's data, or from the most recent ORSAT analysis at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%*S*_{fuel}** = 1.0%, then enter 1.0 into the equations not 0.01 and if **vol%*dry**O*_{2, exhaust}** = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.346(c), 10/1/04]

Section 11. ADEC Notification Form¹⁰

Stationary Source Name

Air Quality Permit Number

Company Name

When did you discover the Excess Emissions/Permit Deviation?

Date: ____ / ____ / ____ Time: ____ : ____

When did the event/deviation occur?

Begin Date: ____ / ____ / ____ Time: ____ : ____ (please use 24hr clock)

End Date: ____ / ____ / ____ Time: ____ : ____ (please use 24hr clock)

What was the duration of the event/deviation?: ____ : ____ (hrs:min) or ____ days

(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for Notification: (please check only 1 box and go to the corresponding section)

☐ Excess Emissions - Complete Section 1 and Certify.

☐ Deviation from Permit Condition - Complete Section 2 and Certify

☐ Deviations from COBC, CO, or Settlement Agreement - Complete Section 2 and Certify

Section 1. Excess Emissions

(a) Was the exceedance: ☐ Intermittent or ☐ Continuous

(b) Cause of Event (Check one that applies):

☐ Start Up /Shut Down

☐ Natural Cause (weather/earthquake/flood)

☐ Control Equipment Failure

☐ Scheduled Maintenance/Equipment Adjustment

☐ Bad fuel/coal/gas

☐ Upset Condition

☐ Other _____

(c) Description

Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emissions Units Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

Unit ID	Unit Name	Permit Condition Exceeded/Limit/Potential Exceedance

¹⁰ Revised as of August 24, 2006.

(e) Type of Incident (Please Check only one).

- ☐ Opacity _____ % ☐ Venting _____ (gas/scf) ☐ Control Equipment Down
☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Flaring
☐ Marine Vessel Opacity ☐ Other: _____

(f) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable? ☐ Yes ☐ No

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ Yes ☐ No

Certify Report (go to end of form)

Section 2 Permit Deviations

(a) Permit Deviation Type (check one only box, corresponding with the section in the permit).

- ☐ Emission Unit Specific
☐ Failure to monitor/report
☐ General Source Test/Monitoring Requirements
☐ Recordkeeping/Reporting/Compliance Certification
☐ Standard Conditions Not Included in Permit
☐ Generally Applicable Requirements
☐ Reporting/Monitoring for Diesel Engines
☐ Insignificant Emission Unit
☐ Record Keeping Failure
☐ Stationary Source Wide
☐ Other Section _____ (title of section and section number of your permit).

(b) Emission Unit Involved.

Identify the emission unit involved in the event, using the same identification number and name

Unit ID	Unit Name	Permit Condition / Potential Deviation

as in the permit. List the corresponding permit conditions and the deviation.

(c) Description of Potential Deviation:

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions:

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

To Submit this Report:

Fax to: 907-451-2187;

Email to: airreports@dec.state.ak.us - *if emailed, the report must be certified within the Operating Report required for the same reporting period per condition 50;*

Mail to: ADEC, Air Permits Program, 610 University Avenue, Fairbanks, AK 99709-3643;

Phone Notification: 907-451-5173 - *phone notifications require a written follow-up report within the deadline listed in condition 49; OR*

Online Submission: *(Website is not yet available) - if submitted online, the report must be certified within the Operating Report required for the same reporting period per condition 50.*

Alaska Department of Environmental Conservation

Air Permits Program

May 16, 2007

Golden Valley Electric Association

Delta Power Plant

STATEMENT OF BASIS

of the terms and conditions for

Permit No. AQ0880TVP01

Prepared by Cynthia Williams and David Schleiger

May 16, 2007

INTRODUCTION

This document sets forth the statement of basis for the terms and conditions of Operating Permit No. AQ0880TVP01.

STATIONARY SOURCE IDENTIFICATION

Section 1 of Operating Permit No. AQ0880TVP01 contains information on the stationary source as provided in the Title V permit application.

The stationary source is owned and operated by Golden Valley Electric Association, and Golden Valley Electric Association is the Permittee for the stationary source's operating permit. The Standard Industrial Classification (SIC) Code for the Delta Power Plant is 4911. The plant generates electricity for sale. The plant is operated as an emergency generator only, backing up other facilities in the area. The plant uses a black start diesel engine nominally rated at 500 brake horsepower (bhp) to start a John Brown turbine nominally rated at 23.1 megawatts (MW) output. During each black start, the black start engine operates for approximately 5 minutes at which time the turbine takes over and the engine shuts down. Both the black start engine and the John Brown turbine burn fuel oil with a sulfur content of less than 0.2% by weight in order to accommodate cold climate conditions. Fuel is trucked to the site and stored in a 50,000 gallon aboveground storage tank. Heat for the building is provided by a Thermo Pride oil-fired furnace nominally rated at 0.4 million Btu per hour (MMBtu/hr) input. The furnace also burns fuel oil with a sulfur content of less than 0.2% by weight. There are no alternate operating scenarios for the Delta Power Plant.

The Delta Power Plant was previously permitted to operate as Chena 6 (Operating Permit No. AQ0174TVP01) and was previously located in Fairbanks, Alaska. The source is permitted under Alaska's minor construction permit program as a result of GVEA accepting an Owner Requested Limit (ORL) on the annual quantity of nitrogen oxides (NOx) emitted. The facility is allowed to release no more than 249 tons of NOx per year calculated on a 12-month rolling basis. As a result of this limit, all other pollutants will be released at a rate of less than 100 tons per year. In order to determine and regulate emissions, the plant monitors and records the quantity of fuel oil burned by the turbine. A value of 128,909 Btu per gallon of fuel oil is used to convert the quantity of fuel oil burned by the turbine to the number of Btu's burned. This fuel Btu value was received from the Williams Refinery (now the Flint Hills Refinery) in North Pole, Alaska, which supplied the fuel oil for the source test and is the primary supplier of fuel oil to the Delta Power Plant. The plant also collects information on the sulfur content of the fuel oil burned. This information is received from the supplier with each shipment of fuel oil received. Compliance monitoring primarily involves monitoring and recording the quantity of fuel burned by the turbine. Although the turbine was originally constructed in 1976, its control system has been upgraded from a conventional to a digital control system. This system automatically records the gallons of fuel burned by the turbine. The sulfur content of the fuel burned by the plant is also monitored. Actual analysis of the fuel is conducted by the supplier. Documentation is received with each load of fuel received by the plant. Finally, visible emissions from the turbine are monitored. Visible emission monitoring is used to demonstrate compliance with opacity limitations as well as particulate matter emissions.

EMISSION UNIT INVENTORY AND DESCRIPTION

Under 18 AAC 50.326(a), the Department requires operating permit applications to include identification of all emissions-related information, as described under 40 CFR 71.5(c)(3).

The emission units at the Delta Power Plant that have specific monitoring, recordkeeping, and reporting requirements are listed in Table A of Operating Permit No. AQ0880TVP01.

Table A of Operating Permit No. AQ0880TVP01 contains information on the emission units regulated by this permit as provided in the application. The table is provided for informational and identification purposes only. Specifically, the source rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

A summary of the potential to emit (PTE)¹ and assessable PTE as indicated in the application from the Delta Power Plant is shown in the table below.

Table D - Emissions Summary, in Tons per Year (TPY)

Pollutant	NO _x	CO	PM-10	SO ₂	VOC	HAPS	Total
PTE with ORL	249	1.2	4.4	71.9	0.1	0.5	327
Assessable PTE	249			72			321

The assessable PTE listed under condition 21.1 is the sum of the emissions of each individual regulated air pollutant for which the stationary source has the potential to emit quantities greater than 10 TPY. The emissions listed in Table D are estimates that are for informational use only. The listing of the emissions does not create an enforceable limit to the stationary source.

For criteria pollutants, emissions are as provided in the application, as follows:

Criteria Pollutants^{b,c}

Pollutant	EF	PTE		PTE with ORL	
	lb/mmBtu	lb/yr	t/yr	lb/yr	t/yr
NO _x	7.0E-01	1,908,985	954	498,000	249.0
CO	3.3E-03	9,000	4	2,348	1.2
PM-10	1.2E-02	32,725	16	8,537	4.3
SO ₂	1.01S	550,879	275	143,709	71.9
VOC	4.1E-04	1,118	1	292	0.1

S = wt% sulfur in fuel

^b AP-42, Table 3.1-1 (April 2000)

^c AP-42, Table 3.1-2a (April 2000)

¹ Potential to Emit or PTE means the maximum capacity of a stationary source to emit a pollutant under its physical or operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source, as defined in AS 46.14.990(23), effective 12/3/05.

In their application, GVEA estimated the hazardous air pollutants (HAPS) by using the AP-42 emission factors. The project's HAPS emissions are insignificant.

BASIS FOR REQUIRING AN OPERATING PERMIT

In accordance with 18 AAC 50.326(a), an owner or operator of a Title V source² must obtain a Title V permit consistent with 40 C.F.R. Part 71, as adopted by reference in 18 AAC 50.040. This stationary source requires an operating permit because it is classified under:

18 AAC 50.326(a) and 40 C.F.R. 71.3(a)(1), A major stationary source of air pollutants or any group of stationary sources as defined in section 302 of the Act, that directly emits, or has the potential to emit, 100 tpy or more of any air pollutant (including any major source of fugitive emissions of any such pollutant, as determined by rule by the Administrator.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

No previous air quality control permit-to-operate exists for this stationary source.

Construction Permits

Construction Permit No. AQ0880MSS01 was issued to this stationary source on June 24, 2005. The stationary source-specific requirements established in this construction permit are included in the new operating permit as described in Table D.

Title V Operating Permit Application, Revisions and Renewal History

The owner or operator submitted an application on September 21, 2006.

NSPS APPLICABILITY

EU 1(turbine) was found by the Department not to be subject to NSPS Subparts GG and KKKK because it was constructed in 1976 and GVEA has performed no turbine modifications that would cause NSPS to apply. GVEA upgraded the turbine control system from conventional to digital, but this upgrade did not affect the emission performance. This assessment is also stated in the TAR for AQ0880MSS01.

EU 2(black start generator) was found by the Department not to be subject to NSPS Subpart IIII (Diesel Engines (Compression Combustion Engines)) because it was constructed before July 11, 2005.

EU 4 (fuel storage tank) was found by the Department not to be subject to NSPS Subpart Kb. The tank was originally permitted in 1997. The 50,000 gallon (189 m³) tank is used to store #1 diesel fuel at atmospheric pressure. Flint Hills quoted GVEA a vapor pressure for #1 diesel as 0.008 psi (.055 kPa). The Subpart as amended on October 15, 2003, does not apply to tanks with a volume greater than 151 m³ storing a liquid with a maximum true vapor pressure less than 3.5 kPa.

² "Title V source" means a stationary source classified as needing a permit under AS 14.130(b) [ref. 18 AAC 50.990(111)].

CAM APPLICABILITY

The Department found that 40 CFR 64 (CAM Rule) is not applicable to any of the Emission Units, because none of the units have a control device to meet emission limits as described under 40 CFR 64.

COMPLIANCE HISTORY

The stationary source has operated at its current location since 2005. Review of the permit files for this stationary source, which includes the past inspection reports indicate a stationary source generally operating in compliance with its operating permit.

STATIONARY SOURCE-SPECIFIC REQUIREMENTS CARRIED FORWARD

State of Alaska regulation in 18 AAC 50.326(j) with reference to 40 CFR Part 71.6 requires that an operating permit include all emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance. These requirements include, but not limited to, each facility-specific requirement established in the most recent operating permit or in any other construction permit issued under 18 AAC 50 that are still in effect at the time of permit issuance.

Table E below lists the requirements carried over from Construction Permit No. AQ0880MSS01 into Operating Permit No. AQ0880TVP01.

Table E - Comparison of Construction Permit No AQ0880MSS01 Conditions to Operating Permit No. AQ0880TVP01 Conditions³

Permit No. AQ0880MSS01 Condition number	Description of Requirement	Permit No. AQ0880TVP01 Condition Number	How condition was revised
2	Label emissions units		Omitted, construction condition satisfied, confirmed in 2006 FCE
3	Submit installation information		Omitted, construction condition satisfied, confirmed in 2006 FCE
4	Stack construction		Omitted, stack ports constructed as required, confirmed in source test 2/14/05
5	NOx emission limit	11	Emission factor from source test conducted under construction permit condition 5.3 replaced EPA AP-42 factor for combustion gas turbines. Higher heating value of fuel used in the source test replaces 133,021MMBtu/gal used in construction permit.
5.3	NOx emission limit, source testing, fuel testing		Omitted, source test completed 2/14/06. Fuel Btu provided from vendor certificate.
6	Fuel sulfur limit	12	unchanged
7.1	Initial visible emissions RM 9, EU ID 2&3		Omitted, compliance assumed based on certification in Title V permit application
10	Maintenance requirements	10	unchanged

³ This table does not include all standard and general conditions.

STATEMENT OF BASIS FOR THE PERMIT CONDITIONS

The state and federal regulations for each condition are cited in Operating Permit No. AQ0880TVP01.

Conditions 1 and 2 - 4, Visible Emissions Standard and MR&R

Applicability: This regulation applies to operation of all fuel-burning equipment in Alaska. EU ID 1 is fuel-burning equipment.

Factual basis: Condition 1 requires the Permittee to comply with the federal and the state visible emission standards applicable to fuel-burning equipment and incinerators. The Permittee shall not cause or allow the equipment to violate these standards.

This condition has recently been adopted into regulation as a standard condition. MR&R requirements are listed in conditions 2 through 4 of the permit.

The Permittee must establish by actual visual observations, which can be supplemented by other means, such as a defined Stationary Source Operation and Maintenance Program, that the stationary source is in continuous compliance with the State's emission standards for visible emissions and particulate matter.

These conditions detail a stepwise process for monitoring compliance with the State's visible emissions and particulate matter standards for liquid and gas fired sources. Equipment types covered by these conditions are internal combustion engines, turbines, heaters, boilers, and flares. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program.

Monitoring frequencies for hydrocarbon fuels, both liquid and gaseous, are detailed in these conditions. The monitoring intervals for gaseous fuels are less frequent than for liquid fuels in recognition of the reduced propensity of gaseous fuels to produce particulate matter as a result of combustion. This reduced level of monitoring for individual facilities in conjunction with the very large number of gas fired sources in Alaska should provide the Department with sufficient data to evaluate the compliance history of these sources as a category.

Reasonable action thresholds are established in these conditions that require the Permittee to progressively address potential visible emission problems from sources either through maintenance programs and/or more rigorous tests that will quantify whether a specific emission standard has been exceeded.

Liquid Fired:

Monitoring – The visible emissions may be observed by either Method-9 or the Smoke/No Smoke plans as detailed in condition 2.1. Corrective actions such as maintenance procedures and either more frequent or less frequent testing may be required depending on the results of the observations.

Recordkeeping - The Permittee is required to record the results of all visible emission observations and record any actions taken to reduce visible emissions.

Reporting - The Permittee is required to report: 1) emissions in excess of the federal and the state visible emissions standard and 2) deviations from permit conditions. The Permittee is required to include copies of the results of all visible emission observations with the stationary source operating report.

Conditions 5 and 6 - 8, Particulate Matter (PM) Standard

Applicability: The PM standard applies to operation of all fuel burning equipment in Alaska. EU ID 1 is fuel-burning equipment. The SIP standard for PM applies to all fuel-burning equipment because it is contained in the federally approved SIP dated October 1983.

Factual basis: Condition 5 requires the Permittee to comply with the state PM (also called grain loading) standard applicable to fuel-burning equipment. The Permittee shall not cause or allow fuel-burning equipment to violate this standard.

MR&R requirements are listed in conditions 6 - 8 of the permit.

The Permittee must establish by actual visual observations which can be supplemented by other means, such as a defined Stationary Source Operation and Maintenance Program, that the stationary source is in continuous compliance with the State's emission standards for particulate matter.

These conditions detail a stepwise process for monitoring compliance with the State's particulate matter standards for liquid and gas fired sources. Equipment types covered by these conditions are internal combustion engines, turbines, heaters, and boilers. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program.

Monitoring frequencies for hydrocarbon fuels, both liquid and gaseous, are detailed in these conditions. The monitoring intervals for gaseous fuels are less frequent than for liquid fuels in recognition of the reduced propensity of gaseous fuels to produce particulate matter as a result of combustion. This reduced level of monitoring for individual facilities in conjunction with the very large number of gas fired sources in Alaska should provide the Department with sufficient data to evaluate the compliance history of these sources as a category.

Liquid Fired:

Monitoring – The Permittee is required to conduct PM source testing if threshold values for opacity are exceeded.

Recordkeeping - The Permittee is required to record the results of PM source tests.

Reporting - The Permittee is required to report: 1) incidents when emissions in excess of the opacity threshold values have been observed, 2) and results of PM source tests. The Permittee is required to include copies of the results of all visible emission observations with the stationary source operating report.

Insignificant Sources:

For EU ID(s) 2-4, no monitoring is required because these sources are insignificant sources based on actual emissions. The Permittee must annually certify compliance under condition 51 with the particulate matter standard.

Condition 9, Sulfur Compound Emissions

Applicability: The sulfur emission standard applies to operation of all fuel-burning equipment in the State of Alaska. EU ID 1 is fuel-burning equipment. The SIP standard for sulfur dioxide applies because it is contained in the federally approved SIP dated October 1983.

Factual basis: The condition requires the Permittee to comply with the sulfur compound emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow the affected equipment to violate this standard.

Sulfur dioxide comes from the sulfur in the liquid, hydrocarbon fuel (#1 diesel fuel). Fuel containing no more than 0.75 percent sulfur by weight will always comply with the emission standard. For fuels with sulfur content higher than 0.75 percent, the condition requires the Permittee to use Section 10 to calculate the sulfur-dioxide concentration using the equations to show that the standard is not exceeded.

Fuel sulfur testing will verify compliance.

Fuel gas sulfur is measured as hydrogen sulfide (H_2S) concentration in ppm by volume (ppmv). Calculations⁴ show that fuel gas containing no more than 4000 ppm H_2S will always comply with this emission standard. This is true for all fuel gases, even with no excess air.

Equations to calculate the exhaust gas SO_2 concentrations resulting from the combustion of fuel gas were not included in this permit. Fuel gas with an H_2S concentration of even 10 percent of 4000 ppm is currently not available in Alaska and is not projected to be available during the life of this permit.

Recordkeeping - For Diesel fuel, the Permittee is required to record the fuel sulfur content or fuel grade of each shipment and all material balance calculations, and for fuel gas, the H_2S concentration of the fuel gas.

Reporting - The Permittee is required to report as State excess emissions whenever the fuel combusted causes sulfur compound emissions to exceed the standards in this condition. The Permittee is required to include the material balance calculations for fuel oil in the excess emissions report.

The Permittee is required to include copies of the records mentioned in the previous paragraph with the stationary source operating report.

Condition 10-12, Pre-Construction Permit Requirements

Applicability: Apply because these are stationary source-specific requirements that were carried forward from Construction Permit No. AQ0880MSS01 for compliance with the attainment or maintenance of ambient air quality standards or maximum allowable ambient concentrations and to avoid classification as a PSD major stationary source.

Periodic Monitoring

ADEC must include all Title I permit obligations to limit the source's potential to emit. Also where the Title I permit does not contain sufficient periodic testing or instrumental or non-instrumental monitoring, ADEC must develop periodic monitoring (and corresponding record keeping and reporting) consistent with 40 CFR 71.6(a)(3)(B) to yield reliable data from the relevant time period that are representative of the source's compliance with the permit.

Under AAC 50.326(j), the Department developed additional periodic monitoring through emission source testing to confirm and refine the site-specific emission factor GVEA derived if actual turbine emissions approach 100 tons of NO_x per 12-month rolling period.

⁴ See ADEC Air Permits Web Site at <http://www.dec.state.ak.us/air/ap/docs/sulfgas.pdf>, under "Stoichiometric Mass Balance Calculations of Exhaust Gas SO_2 Concentration."

Factual Basis: NOx Emissions Limit: GVEA has accepted a Minor Permit under 18 AAC 50.508(5) to avoid classification as a PSD-major stationary source. The permit includes a NOx emissions limit of 249 tpy as well as surrogate monitoring, recordkeeping, and reporting to assure that the emission units will not approach this limit. GVEA conducted a source test for NOx on 2/4/06. GVEA derived a maximum fuel-specific emission factor of 0.72 pounds per million Btu (lb/MMBtu) from the turbine's test data. The Department reviewed and approved the emission factor on April 5, 2007. This is the highest emission rate of the 4 loads tested.

Under the conditions of the permit, GVEA is required to calculate NOx emissions each month using the emission factor derived from the most recent approved emission test and the higher heating value of 133,005 Btu per gallon of fuel oil. The minor permit caps NOx emissions below 250 tpy, thus avoiding stationary source PSD-Major classification. However, the emissions are still above the new stationary source minor permit threshold listed in 18 AAC 50.502(c).

Since Emission Units 2 and 3 have no significant impact on total emissions, the Title I authors did not consider NOx emissions from these intermittently used sources.

In Title I Permit No. AQ0880MSS01, Equation 1 contained a typographical error listing the higher heating value of the fuel combusted as 133,021 MMBtu/gal. The higher heating value of the fuel should read "133,021 Btu/gallon" or "0.133021 MMBtu/gallon". In this Operating Permit the value of 0.133021 MMBtu/gallon was used to match the rest of the equation.

The HHV of 0.133021 MMBtu/gallon is representative to the maximum HHV that Flint Hills North Pole Refinery provided to ADEC for the period of January 1, 2005 through April 10, 2007 (133,005 Btu/gallon) for diesel fuel #1 produced at the refinery.

Periodic Monitoring under AAC 50.326(j)

The Delta Power Plant is primarily a peaking and or backup power plant and its actual emissions are well below the permitted 249 tons of NOx per year. Per last Operating Report submitted for 2006, the actual emissions reported were less than 10 TPY NOx.

At levels well below their permitted emission limits, ADEC determined that GVEA would not need to reaffirm the fuel-specific emission factor derived from the February 2006 source test, except upon request of ADEC. For equity, ADEC used the TV major threshold of 100 tons per year as the threshold for which GVEA would need to reaffirm the fuel specific emission factor no less than once during a five-year period. To implement this, ADEC added condition 11.6 to the final permit to trigger an emission source test after 850 hours in any 12-month consecutive period of operation of EU 1, if there has been no testing in the past five years. 850 hours at the maximum fuel consumption rate GVEA identified in their application and worst case fuel-specific emission factor corresponds to less than 100 tpy.

Staff determined this testing threshold as follows: Based on fuel consumption of 2,419 gallons per hour maximum *fuel consumption as provided by GVEA*, 850 hours of operation, a higher heating value of 133,021 Btu/gallon, and a NOx emission factor of 0.72 lbs/MMBtu NOx emissions equals 98.46 tpy NOx.

If NOx emissions exceed 100 tons, GVEA will need to reaffirm the site specific and fuel specific emission factor no less than once every five years.

Calculations are based upon the Permittee combusting #1 diesel fuel. The Permittee should expect to conduct source testing if they request an off-permit source change to use alternative fuels at the Delta Power Plant.

SO2 PSD Applicability: The NOx emission cap effectively limits SO2 emissions to avoid PSD major classification for SO2. The fuel sulfur limit adequately protects the annual ambient air quality standard for SO2.

The permit includes terms and conditions: (1) As necessary to ensure that the stationary source will not cause or contribute to a violation of any ambient air quality standard or the standards in 18 AAC 50.110 or to impose a limit under 18 AAC 50.201; including conditions for installation, use and maintenance of monitoring equipment; sampling emissions according to methods prescribed by the Department; providing source test reports, monitoring data, emissions data and information from analyses of any test samples; keeping records; and making periodic reports on process operations and emission; (2) covering performance test requirements for state emission standards; and (3) for maintenance of equipment according to manufacturers or operators maintenance procedures. Permit No. AQ0880TVP01 contains these requirements for GVEA's Delta Power Plant. Note that the ambient air quality protection requirements are the same as the requirements for PSD avoidance.

Conditions 13 - 16, Insignificant Sources

Applicability: These general emission standards apply to all industrial processes fuel-burning equipment, and incinerators regardless of size.

Factual basis: The conditions re-iterate the general standards and require compliance for insignificant sources. The Permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

Insignificant Emission Units (IEU's) at the Delta Power Plant include:

- Thermo Pride oil-fired furnace
- Black Start Diesel Engine
- 50,000 gallon storage tank for #1 fuel oil

1. The Thermo Pride air-fired furnace is rated at 400,000 Btu per hour input and therefore is an IEU on a size or production rate basis under 18 ACC 50.326(g)(7) rated capacity less than 1,700,000 Btu per hour using kerosene, No 1 fuel oil or No. 2 fuel oil. Potential emissions assuming operation 8760 hours per year are presented in Appendix C of GVEA, Delta Power Plant application for a Title V permit.

2. The black start diesel engine is used to start the turbine when electricity is not available. It operates for 5 minutes before the turbine takes over and the engine shuts down. The Technical Analysis Report for the construction permit states: The start cycle for Emission Unit 1 is short, and the resulting duration of black start operation will be minimal on an annual basis. Therefore, Emission Unit 2's emissions are negligible and are not included in the emission calculations. An example of potential emissions from the black start engine is included in Appendix C of the Title V permit application and shows that emissions of any criteria pollutant is under 1 tpy assuming 1000 black starts a year which is more than 1 every 9 hours. This is a very conservative estimate of the number of back starts that could occur

during a year. As a result the black start engine is considered to be an IEU on an emission rate basis under 18 AAC 50.326(e).

3. The 50,000 gallon storage tank storing #1 fuel oil is also considered an IEU on an emission rate basis. Using the NO_x source test result of 0.7 lbs/MMBtu and assuming the PTE NO_x limit of 249 tpy, the turbine has the potential to burn 5,518,843 gallons per year which results in releasing approximately 40 pounds of volatile organic compounds per year from the tank. A printout of the results of running the TANKS program is included in Appendix C of the Title V permit application.

The Department finds that the insignificant sources at this stationary source do not need specific monitoring, recordkeeping and reporting to ensure compliance under these conditions.

Condition 13.1 requires certification that the sources did not exceed state emission standards during the previous year and did not emit any prohibited air pollution. EU ID(s) 2-4 are considered insignificant sources and no monitoring in addition to that specified in the Title V operating permit is required in accordance with Department Policy and Procedure No. AWQ 04.02.103, Topic # 3, 10/8/04 for standby sources.

State air quality regulations adopted effective May 3, 2002 allow for an average six minute opacity observation. The existing regulation, limiting opacity to no more than 20% for more than 3 minutes in any one hour, is included because EPA Region X has not formally approved the changed opacity regulation as part of Alaska's State Implementation Plan (SIP).

Conditions 17 - 19, Standard Terms and Conditions

Applicability: Apply because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions required under 18 AAC 5.0345(a) and (e)-(g) for all operating permits.

Conditions 20, Administration Fees

Applicability: This condition requires the Permittee, owner, or operator to pay administration fees as set out in regulation. Paying administration fees is required as part of obtaining and holding a permit with the department or as a fee for a department action.

Factual Basis: The owner or operator of a stationary source who is required to apply for a permit under AS 46.14.130 shall pay to the Department all assessed permit administration fees. The regulations in 18 AAC 50.400-405 specify the amount, payment period, and the frequency of fees applicable to a permit action.

Conditions 21 - 22, Emission Fees

Applicability: The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These standard conditions require the Permittee to pay fees in accordance with the Department's billing regulations. The billing regulations set the due dates for payment of fees based on the billing date.

The default assessable emissions are emissions of each air pollutant authorized by the permit (AS 46.14.250(h)(1)(A)). Air pollutant means any regulated air pollutant and any hazardous

air pollutant. Therefore, assessable emissions under AS 46.14.250(h)(1)(A) means the **potential** to emit any air pollutant identified in the permit, including those not specifically limited by the permit. For example, hydrogen chloride (HCl) emissions from an incinerator are assessable emissions because they are a hazardous air pollutant, even if there is currently no emission limit on HCl for that class of incinerator.

The conditions also describe how the Permittee may calculate **actual** annual assessable emissions based on previous actual annual emissions. According to AS 46.14.250(h)(1)(B), assessable emissions are based on each air pollutant. Therefore, fees based on actual emissions must also be paid on any pollutant emitted whether or not the permit contains any limitation of that pollutant.

This standard condition specifies that, unless otherwise approved by the Department, calculations of assessable emission based on actual emissions use the most recent previous calendar year's emissions. Since each current year's assessable emission are based on the previous year, the Department will not give refunds or make additional billings at the end of the current year if the estimated emissions and current year actual emissions do not match. The Permittee will normally pay for actual emissions - just with a one-year time lag.

Projected actual emissions may differ from the previous year's actual emissions if there is a change at the stationary source, such as changes in equipment or an emission rate from existing equipment.

If the Permittee does not choose to annually calculate assessable emissions, emissions fees will be based on "potential to emit" (PTE).

The PTE set forth in the condition is based on liquid fuel with a sulfur content of 0.2 percent by weight. If the actual sulfur content of the fuel is greater than these assumptions, the assessable emissions calculations provided by the Permittee should reflect the actual sulfur content. The change in these values may result in SO₂ emissions that could trigger PSD.

Condition 23, Good Air Pollution Control Practice

Applicability: Applies to all sources, except NSPS regulated sources.

Factual basis: The condition requires the Permittee to comply with good air pollution control practices for all sources.

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with appropriate maintenance. If appropriate maintenance is not applied to the equipment, the Department may have to apply more frequent periodic monitoring requirements (unless the monitoring is already continuous) to ensure that the monitoring results are representative of actual emissions.

The Permittee is required to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the Department. The Department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

Condition 24, Dilution

Applicability: This state regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

Factual Basis: The condition prohibits the Permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

Condition 25, Reasonable Precautions to Prevent Fugitive Dust

Applicability: Bulk material handling requirements apply to the Permittee because the Permittee will engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the facility.

Factual Basis: The underlying regulation, 18 AAC 50.045(d), requires the Permittee to take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air.

Condition 26, Stack Injection

Applicability: Stack injection requirements apply to the stationary source because the stationary source contains a stack or source constructed or modified after November 1, 1982.

Factual Basis: The condition prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 27, Air Pollution Prohibited

Applicability: Air Pollution Prohibited requirements apply to the stationary source because the stationary source will have emissions.

Factual Basis: The condition prohibits the Permittee from causing any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can cause violations of this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

The Permittee is required to report any complaints and injurious emissions. The Permittee must keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for these complaints and to submit copies of these records upon request of the Department.

The Department will determine whether the necessary actions were taken. No corrective actions are necessary if the complaint is frivolous or there is not a violation of 18 AAC 50.110, however this condition is intended to prevent the Permittee from prejudging that complaints are invalid.

Condition 28, Technology-Based Emission Standard

Applicability: Technology Based Emission Standard requirements apply to the stationary source because the stationary source contains equipment subject to a technology-based emission standard, such as BACT, MACT, LAER, NSPS or other “technologically feasible” determinations.

Factual Basis: The Permittee is required to take reasonable steps to minimize emissions if certain activity causes an exceedance of any technology-based emission standard in this permit. The conditions of this permit list applicable technology-based emission standards and require excess emission reporting for each standard in accordance with condition 49. Excess emission reporting under condition 49 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under condition 49.

Condition 29, Asbestos NESHAP

Applicability: The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

Factual Basis: The condition requires the Permittee to comply with asbestos demolition or renovation requirements in 40 C.F.R. 61, Subpart M. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with these federal regulations.

Condition 30, Refrigerant Recycling and Disposal

Applicability: Applies if the Permittee engages in the recycling or disposal of certain refrigerants.

Factual Basis: The condition requires the Permittee to comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F, that will apply if the Permittee uses certain refrigerants. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient to ensure compliance with this federal regulation.

Condition 31, NESHAPS Applicability Determinations

Applicability: The Permittee has the responsibility to determine if specific federal regulations apply to its facilities.

Factual basis: The Permittee has conducted an analysis of the stationary source and determined that it is not a major HAPs stationary source based on emissions. This condition requires the Permittee to keep and make available to the Department copies of the major stationary source determination.

Conditions 32 - 33, Halon Prohibitions

Applicability: These prohibitions apply to all facilities that use halon for fire extinguishing and explosion inertion.

Factual basis: These conditions incorporate applicable 40 C.F.R. 82 requirements. The Permittee may not cause or allow violations of these prohibitions.

Condition 34, Open Burning

Applicability: The open burning state regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the stationary source.

Factual Basis: The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the stationary source.

No specific monitoring is required for this condition. Condition 34.1f requires the Permittee to keep "sufficient records" to demonstrate compliance with the standards for conducting open burning, but does not specify what these records should contain.

More extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Additional monitoring is achieved through condition 27, which requires a record of complaints.

Condition 35, Requested Source Tests

Applicability: Applies because this is a standard condition to be included in all permits.

Factual Basis: The Permittee is required to conduct source tests as requested by the Department. Monitoring consists of conducting the requested source test.

Conditions 36 - 38, Operating Conditions, Reference Test Methods, Excess Air Requirements

Applicability: Apply because the Permittee is required to conduct source tests by this permit.

Factual Basis: The Permittee is required to conduct source test as set out in conditions 36 through 38. These conditions supplement the specific monitoring requirements stated elsewhere in this permit. Compliance monitoring with conditions 36 through 38 consist of the test reports required by condition 43.

Condition 39, Test Exemption

Applicability: Applies when the source exhaust is observed for visible emissions.

Factual Basis: As provided in 18 AAC 50.345(a), 5/03/02, the requirements for test plans, notifications and reports do not apply to visible emissions observations by smoke readers, except in connection with required particulate matter testing.

Conditions 40 - 43, Test Deadline Extension, Test Plans, Notifications and Reports

Applicability: Apply because the Permittee is required to conduct source test by this permit.

Factual Basis: Standard conditions 18 AAC 50.345(l) - (o) are incorporated through these conditions. These standard conditions supplement specific monitoring requirements stated elsewhere in this permit. The source test itself monitors compliance with this condition.

Condition 44, Particulate Matter (PM) Calculations

Applicability: Applies when the Permittee tests for compliance with the PM standard.

Factual Basis: The condition incorporates a regulatory requirement for PM source tests. This condition supplements specific monitoring requirements stated elsewhere in this permit.

Condition 45, Recordkeeping Requirements

Applicability: Applies because the Permittee is required by the permit to keep records.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide an evidence of compliance with this requirement.

Condition 46, Certification

Applicability: This is a standard condition to be included in all permits. Applies because every permit requires the Permittee to submit reports.

Factual Basis: This condition requires the Permittee to certify all reports submitted to the Department. To ease the certification burden on the Permittee, the condition allows the excess emission reports to be **certified** with the stationary source report, even though it must still be **submitted** more frequently than the stationary source operating report. This condition supplements the reporting requirements of this permit.

Condition 47, Submittals

Applicability: Applies because the Permittee is required to send reports to the Department.

Factual Basis: This condition requires the Permittee to send submittals to the address specified in this condition. Receipt of the submittal at the correct Department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of this permit.

Condition 48, Information Requests

Applicability: Applies to all Permittees, and incorporates a standard condition.

Factual Basis: This condition incorporates a standard condition in regulation, which requires the Permittee to submit information requested by the Department. Monitoring consists of receipt of the requested information.

Condition 49, Excess Emission and Permit Deviation Reports

Applicability: Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two state regulations related to excess emissions - the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

In accordance with 40 CFR 71.6(a)(3)(iii)(C), a deviation is not always a violation. For a situation lasting more than 24 hours, which constitutes a deviation, each 24-hour period is considered a separate deviation. "Deviation" as defined in 40 CFR 71 means both "excess emission" and "permit deviation" as used in this permit, which includes:

1. a situation where emissions exceed an emission limitation or standard;
2. a situation where process or emissions control device parameter values indicate that an emission limitation or standard has not been met;

3. a situation in which observations or data collected demonstrate noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit (including indicators of compliance revealed through parameter monitoring);
4. a situation in which any testing, monitoring, recordkeeping or reporting required by this permit is not performed or not performed as required;
5. a situation in which an exceedance or an excursion, as defined in 40 CFR Part 64, occurs; and,
6. failure to comply with a permit term that requires submittal of a report.

In accordance with 18 AAC 50.990(34) "excess emissions" means emissions of an air pollutant in excess of any applicable emission standard or limitation which is item 1 of the above definitions from 40 CFR 71. These definitions shall be considered in determining an "excess emissions" or "permit deviation" when reporting an occurrence using the ADEC notification form.

The reports themselves and the other monitoring records required under this permit provide monitoring of whether the Permittee has complied with the condition. Please note that there may be additional federally required excess emission reporting requirements.

Section 11, Notification Form

The Department modified the notification form, deviating from standard permit condition IV, to more adequately meet the requirements of Chapter 50, Air Quality Control. The modification consisted of correcting typos and moving the *Failure to monitor/report* and *Recordkeeping* checkboxes to **Section 2 Permit Deviations**.

Condition 50, Operating Reports

Applicability: Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit. The reports themselves provide monitoring for compliance with this condition.

Condition 51, Annual Compliance Certification

Applicability: Applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. The reports themselves provide monitoring for compliance with this condition.

Condition 52, NSPS and NESHAP Reports

Applicability: Applies to emission units subject to NSPS or NESHAP federal regulations.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60, 40 C.F.R. 61, and 40 C.F.R. 63. The reports themselves provide monitoring for compliance with this condition.

Conditions 53 - 55, Permit Changes and Revisions Requirements

Applicability: Apply because these are standard conditions to be included in all operating permits.

Factual Basis: These are conditions required in 40 CFR 71.6 for all operating permits to allow changes within a permitted stationary source without requiring a permit revision.

The Permittee did not request trading of emission increases and decreases as described in 71.6(a)(13)(iii).

Condition 56, Permit Renewal

Applicability: Applies if the Permittee intends to renew the permit.

Factual Basis: In accordance with AS 46.14.230(a), this operating permit is issued for a fixed term of five years after the date of issuance, unless a shorter term is requested by the permit applicant. The Permittee is required to submit an application for permit renewal by the specific dates applicable to Delta Power Plant as listed in this condition. As stated in 40 CFR 71.5(a)(1)(iii), submission for a permit renewal application is considered timely if it is submitted at least six months but no more than eighteen months prior to expiration of the operating permit. According to 71.5(a)(2), a complete renewal application is one that provides all information required pursuant to 40 CFR 71.5(c) and must remit payment of fees owed under the fee schedule established pursuant to 18 AAC 50.400. 40 CFR 71.7(b) states that if a source submits a timely and complete application for permit issuance (including renewal), the source's failure to have a permit is not a violation until the permitting authority takes final action on the permit application. Therefore, for as long as an application has been submitted within the timeframe allowed under 40 CFR 71.5(a)(1)(iii), and is complete before the expiration date of the existing permit, then the expiration of the existing permit is extended and the Permittee has the right to operate under that permit until the effective date of the new permit. However, this protection shall cease to apply if, subsequent to the completeness determination, the applicant fails to submit by the deadline specified in writing by the Department any additional information needed to process the application. Monitoring, recordkeeping, and reporting for this condition consist of the application submittal.

Conditions 58 - 63, General Compliance Requirements and Schedule

Applicability: Apply because these are standard conditions to be included in all permits.

Factual Basis: These are standard conditions for compliance required for all operating permits.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

RESPONSE TO COMMENTS

Owner Name: Golden Valley Electric Association, Inc.
Public Comment Closing Date: March 12, 2007
Source Name: Delta Power Plant

Application No.: 880
Permit No. AQ0880TVP01

The public comment period for Golden Valley Electric Association, Inc., Delta Power Plant operating permit, closed on March 12, 2007. Comments were received from Golden Valley Electric Association & Tom Gibbons of Steigers Corporation. Comments appear exactly as submitted by the commenters. This paper provides ADEC's responses to the comments.

1.

From: Golden Valley Electric Association

Page 2, Table B.

Under Installation Date, it should say for the black start diesel unit: "constructed in 1976 and moved to Delta in 2005" and for the Thermo Pride Oil Fired Furnace: "constructed in 1990 and moved to Delta in 2005". Retaining this history is important.

Response from ADEC:

Suggested change made.

2.

From: Golden Valley Electric Association

Page 14, Condition 20.1

The facility assessable potential to emit should be 321 tons per year as presented on page 3 in Table C of the Statement of Basis.

Response from ADEC:

ADEC corrected the typographical error and the requested change was made.

3.

From: Golden Valley Electric Association

Page 15, Condition 22.

I believe Condition 22 should only apply to EU ID 1 and not to EU IDs 2&3.

Response from ADEC:

The Department agrees that condition 22 should only apply to EU ID 1. EU IDs 2 and 3 have been removed from this condition of the permit.

4.

From: Golden Valley Electric Association

Pages 19 and 20, Conditions 31 & 32

Conditions 31 & 32 could be removed if GVEA makes a certified statement that halon is not used at the facility.

Response from ADEC:

The Department agrees that these conditions could be removed from the permit had GVEA submitted in their application, or submitted a certification statement, that halon is not used at the facility. Until such time, the permit terms will remain in the permit.

5.

From: Golden Valley Electric Association

Pages 22-23, conditions 33.7, 33.8, and 33.9.

These conditions could be removed since the facility does not conduct controlled burning or fire-fighting training.

Response from ADEC:

Absent GVEA's certified statement and adequate justification that controlled burning or fire-fighting training will not be conducted at the source, these conditions will remain in the permit.

6.

From: Golden Valley Electric Association

Statement of Basis:

Page 4 "Basis for Requiring an Operating Permit"

This section implies the source is a major because of potential HAPs emissions. The Delta Power Plant is not a major HAPs source; it is a major source for Title V purposes only because it has the potential to emit 100 tons per year of more of an air pollutant as stated in the 40 CFR 71.2 definition of *major source*:

(2) A major stationary source of air pollutants or any group of stationary sources as defined in section 302 of the Act, that directly emits, or has the potential to emit, 100 tpy or more of any air pollutant (including any major source of fugitive emissions of any such pollutant, as determined by rule by the Administrator).--

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Response from ADEC:

The Department agrees that the citation as listed could cause confusion leading a person to believe the source is HAPs major. The reference has been changed to reflect the applicable reference.

7.

From: Golden Valley Electric Association
Statement of Basis:

Page 18, Attachment A.

Attachment A is normally used to report downtime of a CEMS. The Delta Power Plant does not have CEMS and doesn't need this form. I was not able to find a reference to Attachment A in either the draft permit or the Statement of Basis and believe it should be deleted.

Response from ADEC:

Attachment A deleted from the permit as requested.

8.

From: Tom Gibbons, Steigers Corporation

Regarding the Statement of Basis for GVEA's Delta Power Plant public comment draft Title V Permit No. AQ0880TVP01, on page 10 (see attachment) it states:

"Potential emissions assuming operating 8760 hours per year are presented in Appendix C of Construction Permit No. AQ0880MSS01."

There is no Appendix C to Minor Permit No. AQ0880MSS01. Since other parts of the Statement of Basis reference "Appendix C of the Title V permit application," I believe you intended to refer to Appendix C of GVEA's Title V permit application for the emissions from the Thermo Pride Furnace. Is this correct?

Response from ADEC:

A review of the mentioned documents shows that Mr. Gibbons was correct in his assumption that the reference to "Appendix C" should have reflected the application for a Title V permit. The Statement of Basis has been changed to "Appendix C of GVEA, Delta Power Plant application for a Title V permit."

